

A close-up, artistic photograph of a DJ mixer. A pair of white over-ear headphones with blue accents is resting on the mixer's surface. The scene is dramatically lit with vibrant purple and blue light, creating a moody, high-tech atmosphere. The mixer's various knobs, sliders, and buttons are partially visible, some with labels like 'MIXING' and 'CROSS'. The background is blurred, showing more of the equipment and the colorful lighting.

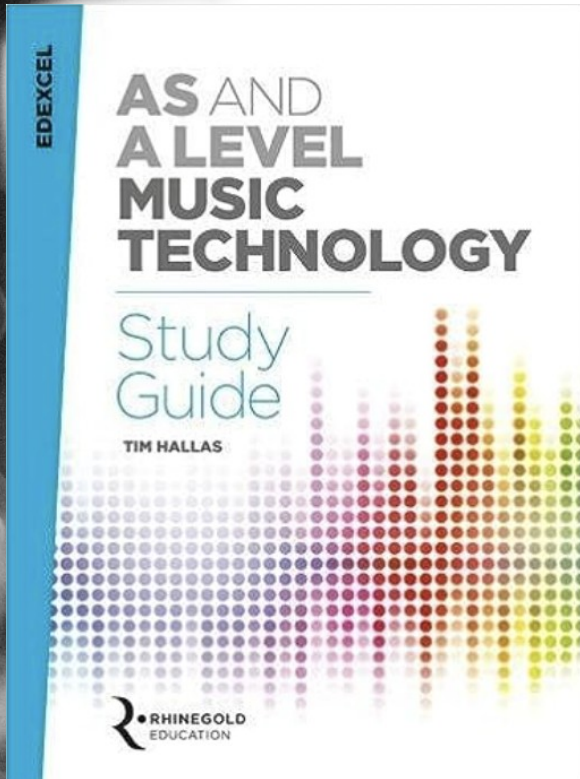
Music Technology

Week 6



Music Technology Contents

- Review Homework
- **Listening**
- Sound Gym
- **Mix Bus**
 - EQ
 - Compression



Textbook + Folder

- Go to the library and get a copy of: Music Technology Study Guide
- Get a Folder to hold all of your paperwork
- Bring a pen and paper or notebook to the lessons.

Reverbs

- <https://www.sweetwater.com/insync/5-types-of-reverb-explained-hall-chamber-room-plate-and-spring/>
- Hall – concert hall
- Chamber – specially designed studio chambers
- Room – normal acoustic space
- Plate – Large metal plate that vibrates
- Spring – spring that vibrates

Listening Exercise – Beach Boys



Take notes for the homework.

- Instrumentation?
- Panning?
- Effects? E.g. Delay
- Recording Process (e.g. Mono, Multitrack Tape, Digital) and the impact.



How to play

[watch video](#)

Your current level: 14
[\(Change level\)](#)

Sound source will be played at a certain location across the stereo field. Choose the right panning setting for it!

[Keyboard Shortcuts](#)

Play game

How you compare

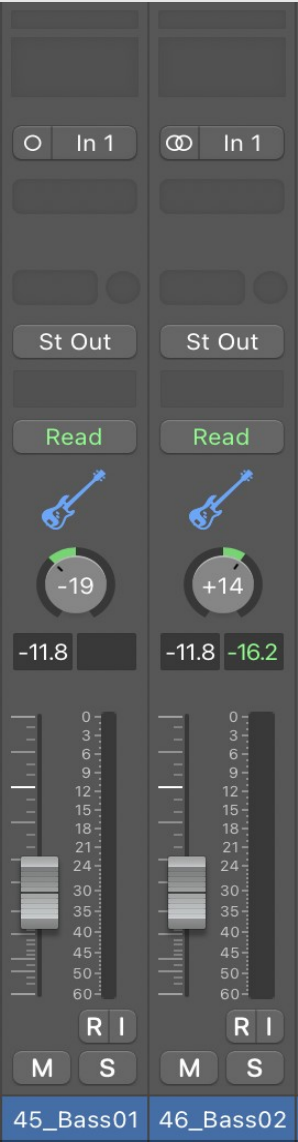
Choose training sounds



Stereo Field

How much signal comes out of each speaker

- Mono
- Left
- Right
- Wide
- Narrow





Drum Sound

Wet/Dry

Large/small (dynamic range)

Bright/Dark

Mono/Stereo

Left/Right

Clean/Distorted

Wide/Narrow

Hifi/Lofi



Recording Techniques

Single Mic / Multiple mics

Single Take / Multiple Takes
(overdubbing)

Single Track / Double Track

One Room / Isolation

Close mic / Room mics

Bouncing using tape

- Bouncing down using tape, also known as ping-pong recording, is a technique for combining multiple tracks into one on a tape recorder to free up tracks for recording. It's a useful method when using tape recorders with a limited number of tracks, and can also simplify mixdowns.
- Here's how to bounce down using tape:
- Leave track 4 empty on the tape recorder.
- Record tracks 1-3.
- Set the channel switch to tape on channels 1-3.
- Pan all tracks to the right.
- Set the faders and master fader to a good level.
- Set the monitor, select line out, and switch to mono.
- Set the record function switch of track 4 to bus R.
- Press play and listen to the mix of tracks 1-3.
- Make any necessary fader or EQ adjustments



Tape Bouncing

Wow / Flutter
Destructive / Non-Destructive
Noise Floor
Saturation
Frequency Response
Track Count

Music Technology - Q5 / 15

	A03 - Knowledge /5	A04 - Analysis /10
<u>Capture</u>		
Sampling		
Synthesis		
Effects		

Music Technology - Pink Floyd

	A03 - Knowledge	A04 - Analysis
<u>Capture</u>	• Tape • DAW • Live vocal / sampled vocals	• noise, saturation, track count, Tape Hiss, Narrow frequency range • Sequencing/programming. Broad frequency range. Time and pitch controlled in the DAW. Tempo change/dance genre. • Repetition vs unique performance
Sampling	• In Remix Guitar parts are reused • Vocals reused • Playground noises	• Faster tempo. Alternates with new synth parts. • Keeps the lyrical content. • Recorded outside the studio on tape then added to the multitrack.
Synthesis	• Synth pads / layers add to sample of original track. • Use of keys (hammond) as backing for guitar solo	• LFOs, white noise, filters, envelopes (ADSR) Use of filters adds development. • Tremolo/modulation create a sense of movement
Effects	• Reverb • Compression • Filters	• 0'19" Long reverb on vocal – drums more dry Space/depth • 0'02" Drums are punchy and loud • Drums are filtered at 2'05" High cut automated to create build.

Music Technology - Q5

	AO3 - Knowledge	AO4 - Analysis
<u>Capture</u>	• Original is captured through mics and recorded live. • Remix is sequenced in a DAW. • Remix takes stems from the original as the basis for the track. • The remix has lots of vocal layers taken from the original giving the impression of overdubbing. • Piano is used in the remix but it is sequenced and isn't sampled from the original.	
Sampling	• No sampling in the original, all acoustic instruments. • The samples in the remix are made from stems from the original. • Vocal samples are looped and stuttered in places. • Vocals from the original are also 'scratched'. • Drums are looped from the original.	

Music Technology - Q5

	AO3 - Knowledge	AO4 - Analysis
Synthesis	• No synthesis in the original; all acoustic instruments. • Synths replace the horn section in places from the original. • Synth bassline replaces the double bass from the original.	
Effects	• There is limited use of effects in the original. • Vocals have the most processing on them with reverb and compression in the original. • Delay is used most prominently on the vocals in the remix. • Stereo widening/ADT is applied to the vocals in places in the remix. • Automated filters are used in the remix.	

Listening Exercise – Captain Beefheart



Take notes for the homework.

- Instrumentation?
- Panning?
- Effects? E.g. Delay
- Recording Process in 1974 (e.g. Mono, Multitrack Tape, Digital) and the impact.



Acoustic recordings
1877



Electronic Mics 1925



Magnetic tape 1945



Digital 1975

Dynamic Processing

- Compressor
- Limiter
- Gate
- Expander



Listening Exercise – Tomorrow Never Knows

- Dynamic Processing?
 - Use of Tape?
 - Production Techniques?
 - Recording process?
 - Effects?
-
- Watch the sound from 13.40



SUPER DELUXE

Listening Exercise – A Little You 1955

- Recording process?
- Characteristics of a 1950s recording?
- Instrumentation
- Dynamic Processing?
- Production Techniques?
- Effects?
- Mastering?
- Modern Remastering?



Listening Exercise – A Little You

- The U 47, introduced in 1949, was a technical revolution and is still considered the indisputable reference for perfect sound. With its well-balanced, extremely vivid response and excellent low-noise performance, this tube microphone raised the bar to a whole new level. Although production had to be discontinued in 1965, the U 47 has remained an extremely sought-after studio microphone that no world-class studio should be without.
- The U 47 is the first Neumann microphone developed after the Second World War. Instead of reissuing pre-war models, Georg Neumann decided to make a fresh start, as tube technology in particular had made enormous progress. This meant that the housing could be designed relatively compact – by the standards of the time. Electronic polar pattern switching between cardioid and omnidirectional was a complete novelty. Swapping capsule heads was no longer necessary, and the capsule could be integrated into the microphone housing. This was the birth of the modern studio microphone.



Listening Exercise – Praise You

- Fatboy Slim used Akai S950 samplers on his 1999 hit song "Praise You".
- The song features a prominent vocal sample from the opening of "Take Yo' Praise" by Camille Yarbrough, as well as a prominent piano sample from the track "Balance and Rehearsal" from a test album entitled Sessions released by audio electronics company JBL in 1973.



Listening Exercise – Praise You

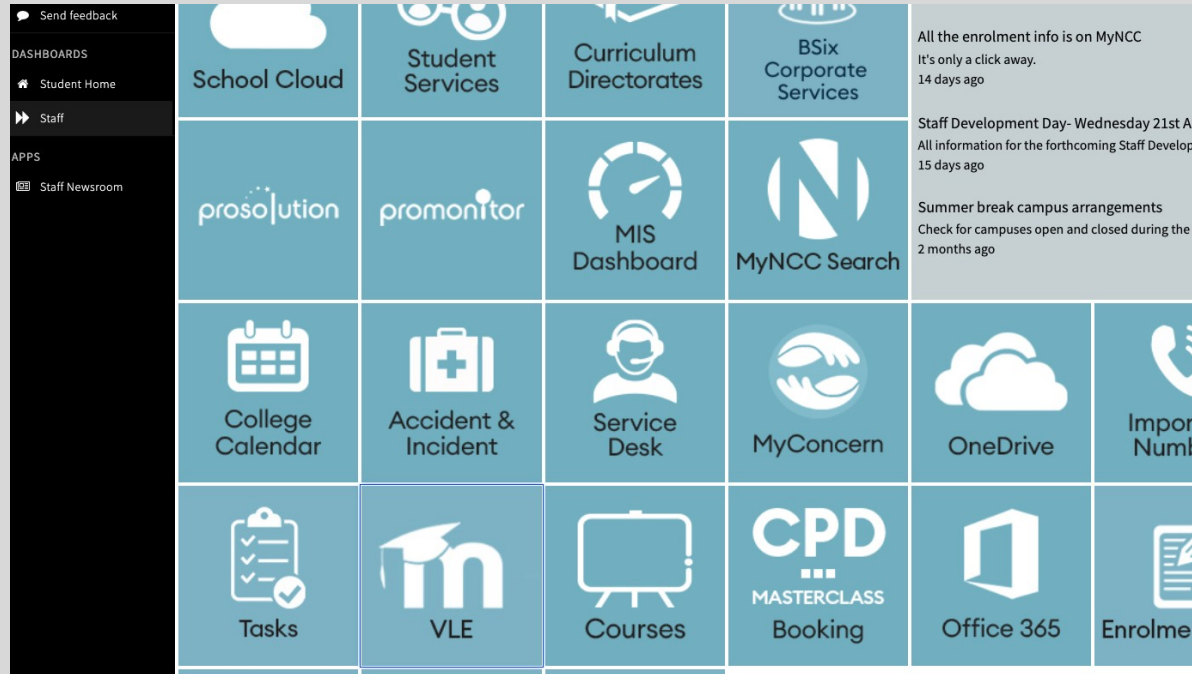
- What are sample rates?
- Audio sampling is the process of transforming a musical source into a digital file. Digital audio recording does this by taking samples of the audio source along the soundwaves at regular intervals. The more samples you take - known as the 'sample rate' - the more closely the final digital file will resemble the original. A higher sample rate tends to deliver a better-quality audio reproduction.
- The audio bit depth determines the number of possible amplitude values we can record for each audio sample.



Listening Exercise – Praise You



Mixing Task



What is the Aim of Mixing?

Exporting a mix.

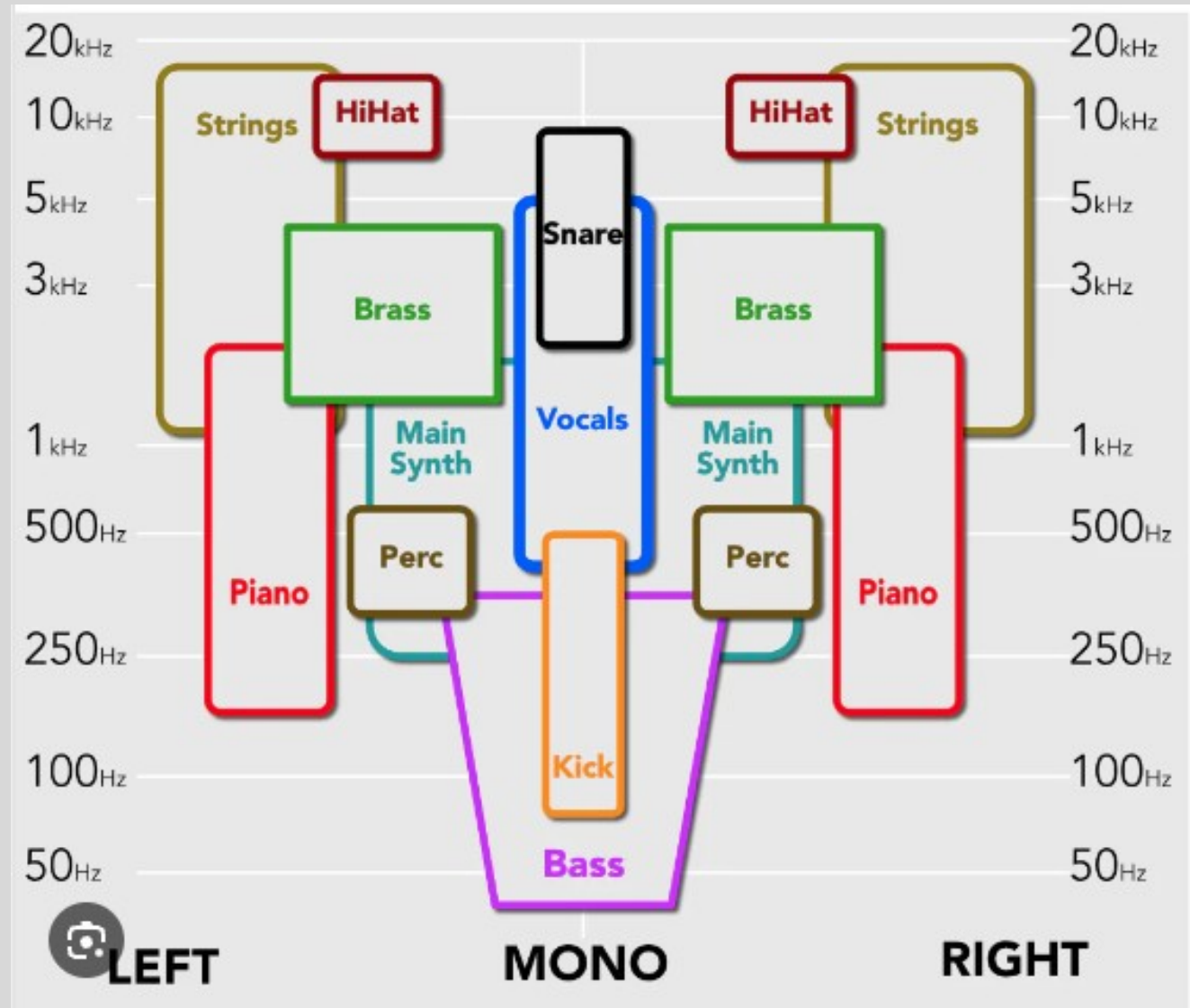


URL

Mixing Practice - Quarantine 



Mixing



Mixing Task

- Download the zip file from the vle
- Create a folder on the desktop called 'my father never loved me'
- Put the zip file in there and expand.
- Create a logic project and save it into the same folder
- Import the audio files (drag and drop)
- Balance the faders (turn them all down the bring them up slowly one at a time)
- Pan the instruments
- Export the mix (16bit Wav)

Sound Gym

- Go to Soundgym
- Create an account with a non-college email e.g. gmail



SoundGym

<https://www.soundgym.co>

SoundGym | Audio Ear Training Online

SoundGym provides institutes, teachers and students the ultimate online ear training, learning and communicating. Learn more. Audio ...

Login

Gym - Soundcoins Store - Recover your password - Beat Training

Free School

Learning programs curated by sound experts. Learn complete ...

Gym Your daily audio workout

EQ Playground - Peak Master - EQ Mirror - EQ Knight - EQ Cheetah

EQ Playground

Master equalization for faster, more accurate EQ decisions.

Lets Start Training

Create a free account and start training your ears!

[More results from soundgym.co »](#)



Mixing

- Download the zip folder from the VLE
- Enrol on the sound gym mixing and mastering course; watch the videos that fit with what you need.
- Practice mixing.

Sound Gym

- Navigate to the learn section and enrol on mix and mastering

 Dashboard Gym **Learn** Stats Contests  

Mix & Mastering (info & settings)



91.7%
Progress

[See stats & progress](#)



25553
Learning Pts.

[How You Compare](#)



1,630,591
SPI

[See profile](#)




Certification



Program completed!

Watch video
V

Pass the Quiz
V

Win award
V

Progress

Homework

- Watch the videos for topic 3 for homework.
- Do the moodle/vle quiz

Topic #4: Time Domain Effects (8)

42 min

	What are time domain (delay) effects?		4 min
	Tape delay part 1 - concepts & interconnection		4 min
	Tape delay part 2 - the 5 parameters		6 min
	Slap Delays Tips and Tricks		7 min
	Vocal Delay Effect Tricks and Tips		5 min
	Phasing, flanging and chorus time domain effects		3 min
	ADT & slapback time domain effects		3 min
	Conventional echo and delay time domain effects		5 min

▼ Component 3 - Listening and Analysing



Screenshot 2024-09-09 at 13.10.38.png

 QUIZ
C3-AS-2017-Q1



 QUIZ
C3-AS-2017-Q2



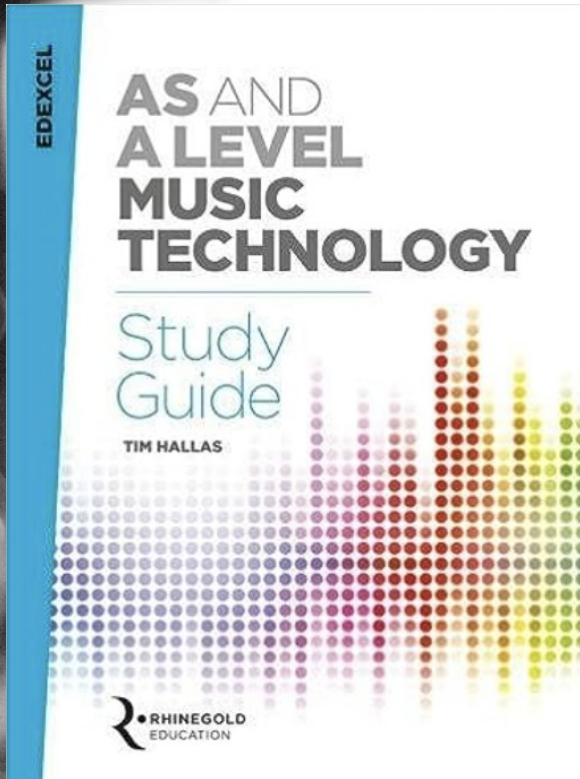
 QUIZ
C3-AS-2017-Q3



 QUIZ
C3-AS-2012-Q4



Hidden from students



Vocab test

- Learn key terms from p161 in the glossary